and make appropriate changes, such as requiring cageless physical collocation and examining ILEC collocation pricing practices.

b. Collocation Equipment (¶¶126-35).

Covad strongly supports the Commission's proposals to eliminate unnecessary restrictions on collocated equipment. Attachment 4, Section 51.323(b) provides a specific rule on this issue that Covad believes would greatly advance the deployment of advanced telecommunications services to all Americans.

This issue plays a very significant role in timely competitive provision of advanced services. Collocation of packet-switching and network management equipment in end-offices would make CLEC DSL networks much more efficient, reliable and cost-effective. By distributing switching capability and functions to the periphery of the local network, the network will, like the Internet backbone, be able to "route around" congested transport links or trouble spots. As a result, transport bandwidth would be maximized and the outage of one of several packet-switches would not cause a general network failure. Prohibiting collocation of packet-switches and network management equipment in central offices essentially forces the CLEC's DSL network into a "star" configuration, in which all DSL traffic is routed from each office to one regional data center. Construction of this center (and procuring the high-bandwidth interoffice transport to the center) very expensive and inefficient.

Over the past few years, in the world of data communications, the terms "switching", "routing", and "multiplexing" functions have become distinctions without a difference. However, the Commission's current rules allow ILECs to engage in endless, case-by-case litigation of the "capabilities" or "use" of a particular piece of equipment in

every state and over every virtually every product model number. The current rule is an historical accident, a relic of the *Expanded Interconnection* docket where the Commission was explicitly not promoting the deployment of competitive, switched local services (which was actually illegal in some states at that time). The purpose behind Section 706 is precisely the opposite—indeed, Section 706(c)(1) *explicitly defines* "advanced telecommunications capability" as including "switched" functionality. 47 U.S.C. § 157nt.

Therefore, Covad supports the Commission's proposal to remove these restrictions upon collocated equipment. *NPRM* at ¶ 129. Covad would like to remind the Commission, however, that whatever rule changes it drafts *must* be crafted so as to prevent ILECs from engaging in wasteful and costly case-by-case litigation of these issues.[33] For instance, the Commission asks in ¶ 130 whether it should repeal the switching restrictions only for equipment that integrates both switching and other functions. Such a decision would only encourage ILECs to engage in another round of product-by-product litigation that further would slow down CLEC deployment of advanced services, because it would let ILECs conjure up claims that a particular piece of equipment does not "integrate" certain functions.

Covad does not believe that it makes sense to differentiate among technologies any more—the artificial difference between "switching" and "multiplexing" or "cross-

[33] Currently, many ILECs will review a CLEC's collocated equipment *prior to turning up power* to that equipment. As a result, if the Commission drafts rules that give the ILEC an "out", the ILEC may simply refuse to turn up power to a collocation node until it is "satisfied" that the equipment comports with its own implementation of the law. The CLEC would then be forced into the position of having to fight any ILEC before it can even offer service to customers. That situation is clearly inconsistent with the object of Section 706.

connect" functions that got us into this mess in the first place. Creating new distinctions will not solve the problem.

Instead, the restriction on switching equipment should be removed in its entirety, as proposed by Covad in Attachment 4, Section 51.323(b). Covad supports the Commission's suggestions apparently designed to conserve central office space. As a result, Covad's proposed rule is centered on "rack-mountable" equipment that the CLEC determines is used or useful for interconnection and access to unbundled network elements.[34]

With the "rack-mountable" provision, Covad does not believe that the Commission's proposal in ¶ 132 is necessary (that no "switching equipment" be permitted to be collocated if there is only room for one carrier to collocate such equipment). Rack-mountable equipment simply does not take up excessive space. "Rack-mountable" is an objective standard that can easily be determined simply by looking at the equipment—there would be no need to go "inside the black box" and utilize a legal process to determine whether a "switch" is hidden in there or not.

Finally, while it is certainly reasonable that collocated equipment meet relevant safety standards, ILECs have used this "Apple Pie" issue to hinder CLEC deployment of DSL services.[35] As a result, Covad supports the Commission's proposals that any safety standards (such as NEBS) be nondiscriminatory—that is, congruent with the standards ILECs maintain for similar equipment in the provision of their own services. *NPRM* at

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[34] Collocation of equipment that would not fit on a standard rack or in a telecommunications equipment bay is not common and generally is done on a case-by-case basis, as such equipment often tends to require special power and cabling arrangements from the ILEC. In the context of a CLEC wishing to collocate a large, 5ESS switch, it is appropriate to consider the impact upon collocation space exhaustion.

[35] *See, e.g.*, DATA Comments in CC Docket Nos. 98-11, 98-26, 98-32 at 21, Attach. 1.

¶¶ 134-35. If ILECs do not utilize NEBS safety standards for their own equipment, they should not be permitted to impose those standards upon CLECs. Covad also believes that ILECs should not be able to impose any reliability standards (including NEBS performance standards) upon collocated equipment. The reliability of a CLEC's equipment is the responsibility of the CLEC alone.

Given evidence of ILEC abuse of NEBS implementation, Covad's proposed rule contains additional protections needed to prevent future abuses. Like other collocation equipment issues, the Commission should re-assert its authority over these disputes, in order to facilitate swift establishment of nationwide precedents over particular safety standards. In addition, when an ILEC claims that a particular piece of equipment does not meet a relevant safety standard, the ILEC should make available to the CLEC a list of equipment that *does* meet this standard and also a list of equipment that the ILEC has placed in its central offices—only then will CLECs be able to know whether they are receiving discriminatory treatment. Finally, as described above, safety standards cannot be utilized by ILECs to maintain an "effective veto" over CLEC deployment—instead, ILECs must first obtain a determination from the Commission that a CLEC may not collocate and use a particular piece of equipment before the ILEC can refuse power to the CLEC's collocation node.

In conclusion, the Commission must reassert its role in the timely resolution of disputes arising under its own rules. As discussed above, the Commission has plenary rulemaking authority with regard to the physical collocation requirements of Section 251(c)(6). State-by-state litigation of this issue has been a disaster, as different states have come to entirely different decisions on even relatively stable technology.

c. Allocation of Space (¶¶ 136-44)

Covad strongly supports the Commission's tentative conclusion in ¶ 137 of the *NPRM* that ILECs be required to make available "alternative physical collocation arrangements" including "physical collocation that does not require the use of collocation cages ('cageless' collocation)." Covad also supports the other Commission proposals, such as the use of shared collocation cages and the option to request collocation space of any size without regard to a standard, minimum requirement.

As Covad showed in its Comments in the Section 706 Petitions, cageless physical collocation gets away from the retrograde, "one-size-fits-all" cage-based approach that ILECs have established. Different CLECs have different collocation needs, and the collocation needs of even one CLEC may vary from office to office. For instance, to serve smaller communities like Saint Margarets, MD, Covad may only need to collocate one or two bays of equipment, which would take up, at most, 15-30 square feet of floor space. To require the CLEC to in all cases construct a large, segregated collocation room (with a separate entryway, doors, heating and air conditioning, and sometimes earthquake-proof support structures) to support an ILEC-required minimum 100 square foot space is not only *silly*, it is costly and time-consuming, wastes precious central office space, and ultimately presents a substantial barrier to entry into smaller towns and residential areas.

Recently, NYPSC Administrative Law Judge Eleanor Stein, in the context of Bell Atlantic's interLATA entry efforts, agreed with this general assessment, indicting Bell

Atlantic's cage-based collocation practices as "tediously slow" and "insufficient to handle possible ubiquitous mass market entry on a commercially reasonable schedule."[36]

Covad would like to reiterate, however, that requiring the availability of "smaller cages" and "common collocation areas" (as Bell Atlantic and SBC are apt to propose in this proceeding) *is not enough* to achieve the Commission's goals in this proceeding. These proposals *still* require CLECs to finance the construction of large, partitioned and separate collocation "rooms" as large as 2100 square feet before CLECs can physically collocate equipment in an office. It is the space that these rooms take which keeps CLECs out of 20-33% of neighborhoods in many instances, and it is the cost of building these rooms that makes it uneconomical for CLECs to serve less-affluent areas. Permitting CLECs to obtain smaller cages or place an uncaged rack of equipment in a segregated collocation room after the CLEC has financed and awaited the construction of a grand, several-thousand square foot room is not a cost or time saving. More needs to be done.

Covad has several proposals to address these issues, which are described in detail in Attachment 4, Sections 51.321 and 51.323 and Attachment 1, Regan Aff ¶¶ 16-31. The cageless collocation arrangement proposed in Attachment 4 is very similar to the arrangement that Covad and U S WEST Communications, Inc. negotiated in the State of Washington.

First, the Commission should mandate cageless physical collocation as proposed by Covad. ILECs would be required to permit CLECs to physically collocate equipment

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[36] *Proceeding on Motion of the Commission to Examine Methods by which Competitive Local Exchange Carriers can Obtain and Combine Unbundled Network Elements*, Proposed Findings of Administrative Law Judge Eleanor Stein, NYPSC Case 98-C-0690 (Aug. 4, 1998) at 22-23.

on a single bay increment basis in an already-conditioned area of the ILEC central office. Sufficient conditioned space generally already exists in ILEC central offices, especially since advances in computing technology have shrunk the size of telecommunications equipment. It is silly to require CLECs to condition *new* space in an ILEC central office if sufficient conditioned space already exists. The separation of CLEC bays from ILEC bays on a bay-to-bay basis is sufficient separation of CLEC and ILEC equipment. Since the time of the AT&T divestiture, AT&T and RBOC equipment in central offices have often been separated only by painted lines on the floor to distinguish AT&T equipment bays from RBOC equipment bays.

Second, the cageless arrangement described above would be available within 45 days of the CLEC's application. The CLEC would only be charged for actual incremental work done to prepare the space for service—for instance, installation of a power outlet and telephone jack, cabling between the bay and the main distribution frame, etc. With a typical DSL network configuration, these initial costs should not be more than as few thousand dollars for each office.

Third, if a dispute arises with regard to the availability of sufficient already-conditioned floor space in a particular office, there would be a "fast-track" dispute resolution process before the relevant state commission. CLECs would have inspection rights to the particular office and also would have access to floor plans and diagrams, subject to an appropriate protective order.

Fourth, in the event that floor space conditioning or additional infrastructure construction is necessary (either because a CLEC has asked for a cage despite the availability of cageless or because no sufficient already-conditioned space is available),

the ILEC may only charge the CLEC the pro rata share of those conditioning charges. That is, if a CLEC requests a 100 square foot cage but the ILEC seeks to build a 1000 square foot room, the CLEC would only be charged $1/10^{th}$ of the collocation room infrastructure, construction, and conditioning charges.[37] Where this work is required, collocation arrangements should be available in 76 business days.

Fifth, the ILEC can only impose reasonable and nondiscriminatory security arrangements on all forms of physical collocation, including cageless physical collocation.

Covad agrees entirely with the Commission's conclusion in ¶ 141 of the *NPRM* that the security arrangements associated with cageless physical collocation can be worked out between the parties, if one can assume good faith negotiations. When carriers are motivated solely by regular commercial (and not anti-competitive) motives, cageless arrangements are actually quite common between competitive telecommunications carriers in the industry.[38] It is only in the cavernous, hallowed halls of ILEC central offices that medieval cages are the norm.

Covad's proposed security arrangements (Attachment 4, Section 51.323(i)) are therefore flexible but premised on the fundamental principles of mutuality, nondiscrimination, and non-interference. Security measures must be taken at the expense of the party desiring those measures, no ILEC security measure can be more stringent

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[37] As discussed above, the Commission has the plenary authority to prescribe national minimum rules and regulations for physical collocation under Section 251(c)(6).

[38] For instance, Intermedia, a CLEC, provides cageless arrangements in its offices in Albany, Birmingham, East Hartford, Glenmont, Poughkeepsie and Syracuse. *See* Minutes of Technical Conference, *Proceeding on Motion of the Commission to Examine Methods by which Competitive Local Exchange Carriers can Obtain and Combine Unbundled Network Elements*, NYPSC Case 98-C-0690, at 484-85 (June 30, 1998).

than what the ILEC utilizes for its own employees or employees of authorized contractors, and no ILEC security measure can impair the ability of a CLEC to maintain the highest level of service to its customers. What is most important to remember about security arrangements is that *no* "one-size-fits-all" approach—including caging competitors—is appropriate for every central office.[39]

The Commission should read the ILEC security arguments that will not doubt permeate this proceeding with great care. These arguments are straight from the old Bellhead playbook—indeed, one ILEC has argued that it would be "irresponsible and irrational" to permit "multiple carriers" to have cageless collocation arrangements because a "multi-carrier environment" would be "a ticking time bomb" that would increase the "risks of network disruption" due to the "potential for confusion" and the potential for a "static discharge" that could affect ILEC equipment.[40] These "harm to the network" arguments are reminiscent of the "foreign attachment" debates and other pre-divestiture footnotes to history.

The Commission cannot forget that Bellhead security arguments against cageless are perfectly aligned with the ILEC's incentive to make physical collocation more expensive and difficult. Covad believes that the confluence of ILEC incentives to delay entry and raise their rivals' costs has led to their collocation cage construction policies. Therefore, any permissible security arrangements for any form of physical collocation,

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[39] For instance, security arrangements in unmanned offices should be different than arrangements in busy metropolitan offices where multiple security guards (who may be available for escort) are stationed at all times. *See* Attachment 1, Regan Aff. ¶ 22 (describing Covad-U S WEST cageless security arrangements).

[40] The quoted passages are taken from *actual* testimony of a Bell Atlantic witness discussing Covad's proposal. *See* Testimony of Donald E. Albert, Bell Atlantic-Virginia Inc., filed Aug. 12, 1998 in VA SCC Case No. PUC980088 ("Albert VA Testimony").

including cageless, *must* be borne by the carrier that desires more security. Only then will the ILEC put in place the appropriate level of security based only upon its actual security concerns and *not* based upon its incentive to make CLEC entry more difficult or expensive.

Another key security principle is nondiscriminatory implementation. Covad is aware that Bell Atlantic has authorized literally *dozens* of independent contractors to enter and perform their work in Bell Atlantic central offices. In New York, Bell Atlantic manages a portfolio of 57 independent contractors or vendors that have various degrees of access to central offices, and in Virginia, Bell Atlantic manages 52 different vendors and contractors.[41] However, when Covad has requested cageless physical collocation in those states, Bell Atlantic's primary objection to the arrangement is that if "multiple carriers" had cageless access to their central offices, the task of "managing" several CLECs in an office would be too difficult and potentially lead to network outages.[42] Thus, while ILECs currently seem able to manage access to central offices for dozens of contractors seemingly without incident, they cannot stand to add a few CLECs to the mix. The implication is clear—when it suits their purposes, ILECs are more than content to give contractors the "run" of the central office, but when it comes to competing carriers, ILECs prefer to deny access entirely.

Finally, the Commission should not permit security arrangements to be used to force CLECs to provide inferior service to their customers. No ILEC security restriction should be permitted that would prevent CLECs from repairing an out-of-service or

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[41] Attachment 1, Regan Aff. ¶ 25.Pacific Bell also uses scores of independent contractors in its central offices, but does not permit Covad personnel to deal with Covad equipment outside of their cages.

[42] *See, e.g.,* Albert VA Testimony at 5-6.

degraded line on a 24 hour a day, 7 day a week basis. A principal Covad objection to virtual collocation arrangements (outlined in Attachment 1, Regan Aff ¶¶ 32-36) is that virtual arrangements do not offer the CLEC this type of hands-on, quality of service control over the its own network. ILECs cannot be permitted to impose security arrangements that put CLEC customer service at risk.

d. Space Exhaustion (¶¶ 145-49)

In ¶¶ 146-49, the Commission recounts many laudable proposals to deal with collocation space exhaustion. The *single most effective step* it can take in remedying perceived central office space shortages would be to mandate cageless physical collocation as proposed by Covad. By removing the need to construct and build space-hogging, caged collocation rooms, space exhaustion problems will be largely alleviated.

The evidence for this proposition comes from the ILECs themselves. Invariably, after denying a request for a 10'x10' cage on account of "no space", the ILEC generally counters that "virtual collocation" of that very same equipment is available in the office. Those statements are, in effect, admissions that there is indeed space in those offices for the equipment to be collocated—there just does not seem to be room for the cage or the segregated collocation room that the ILEC requires the CLEC to build.

Covad's cageless physical collocation proposal would make conditioned floor space available in single-bay increments wherever in the central office that conditioned space could be found. This would permit CLECs to collocate in corners, at the ends of unfilled ILEC line-ups, and in other already-conditioned areas of the central office. As Covad's Director of Collocation, Thomas J. Regan, who has over twenty-seven years

experience with Pacific Bell including extensive experience establishing physical collocation arrangements, says:

> Finding space for a cageless bay of equipment in a central office is like finding space in a packed suitcase for a pair of socks. Finding space for a segregated collocation room in that same central office is like finding space in a packed suitcase for a starched tuxedo.

Attachment 1, Regan Aff. ¶ 31.

Nevertheless, management of ILEC central office space is a major issue and Covad supports the proposals made by the Commission in ¶¶ 146-47 of the *NPRM*. In particular, Covad believes that ILEC filings regarding space exhaustion, and resulting state processes subsequent to these filings, need to be more immediate and expedited. As discussed above, in many instances, ILECs take several months to make the demonstration required by Section 251(c)(6) and Commission rules, and in many instances, the states do not act upon these filings. These filings should happen within thirty days of rejection of an application, and should be served, complete with the detailed floor plans and diagrams, upon the CLEC whose application was rejected in that office and upon all entities who may have already established or recently sought to establish a physical collocation node in that office. Serving all potentially interested parties with this filing will facilitate a swift and proper decision by the state commission.[43] In addition, as proposed by the Commission in ¶ 146, the CLEC whose

[43] It is important to serve CLECs already collocated in that office with a subsequent "no space" claim because those CLECs are most likely to know the actual space conditions in those offices. In addition, those CLECs may have been required to construct large collocation "rooms" in the past, subject to the possibility that they might have some of that initial cost "rebated" when subsequent CLECs collocate in that space; as a result, those CLECs have an incentive to ensure that the collocation space actually be "full" before the ILEC makes a "no space" claim.

physical collocation application was rejected should have the right to inspect the particular office.

Covad also supports the Commission's proposal in ¶ 147 that ILECs should maintain and make available lists of the space availability status in their central offices. Even in a state like New York, with 522 Bell Atlantic offices, Bell Atlantic has only surveyed 100 central offices to determine collocation space status and has not determined the space status of the other 422.[44] Not knowing the space status of a particular office can delay the CLEC one month while such a survey is done. Most importantly, the unsurveyed offices in New York are in smaller, residential and rural communities—further evidence that it is citizens of these areas that are most directly injured by current policies.

ILECs should be required to survey their offices for physical collocation space and should be required to make those lists available on the World Wide Web, complete with the number of current collocators, the amount of floor space being retained by the ILEC for future specific uses (47 CFR 51.323(f)), and measures that the ILEC is taking to make additional space available for physical collocation. Indeed, it is critical that ILECs be required to report regularly the amount of space they are retaining for their own use.[45] Since central office space conditions are constantly changing, these reports should be updated at least every six months and within thirty days of whenever the ILEC

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[44] *See* Minutes of Technical Conference, *Proceeding on Motion of the Commission to Examine Methods by which Competitive Local Exchange Carriers can Obtain and Combine Unbundled Network Elements*, NYPSC Case 98-C-0690, at 105 (June 30, 1998).

[45] Attachment 2, Fogarty Aff. ¶ 27 ("Various groups within [Bell Atlantic] fight to retain and obtain space for their future use. . . . CLECs don't have a voice in this fight for space.").

establishes a new collocation arrangement or whenever the ILEC installs, replaces, retires or removes equipment from the office.

Covad does not dispute that it is conceivable that in some offices all existing floor space could eventually become exhausted. In this situation, Covad has two proposals. First, Covad has proposed to some ILECs "CEV" collocation—an arrangement in which a controlled environmental vault ("CEV"), owned by the CLEC, would be placed either in the parking lot of the central office or on the roof of the office, but which would obtain its power, loops and transport from the central office.[46] As Regan describes, Pacific Bell utilizes CEVs adjacent to central offices for its own purposes. Covad believes that this approach for physical collocation is technically feasible and should be considered at least with regard to true "no space" offices. Simply because such an arrangement would be "unique" (for a CLEC), a temporary "headache" to the ILEC, or present a potential parking lot "eyesore" should not be an excuse to deny Americans access to competitive, advanced telecommunications services.

The other option in true "no space" offices is, of course, virtual collocation. In ¶ 148, the Commission asks questions on the manner in which virtual collocation could be made more attractive to advanced services providers. Attachment 1 (Regan Aff ¶¶ 32-36) lists the problems that Covad sees with *any* virtual collocation arrangement, provided that virtual collocation means that the CLEC must transfer its equipment to the ILEC and that only ILEC employees be permitted to maintain and repair such equipment. A key problem with virtual collocation is that as long as the ILEC employees remain the "sole source" for maintaining and repairing virtually collocated equipment, CLECs have no

[46] Attachment 1, Regan Aff. ¶ 37.

control over their costs or service quality. CLECs are required to train ILEC employees on how to operate the equipment at considerable expense (which, in the event of advanced services equipment is oftentimes very different than traditional circuit-switching equipment). Once trained, the CLEC does not have control over technician performance; it cannot "fire" the ILEC if the ILEC's technician takes too long to fix a broken line card or complete a routine maintenance job. Only by permitting CLECs to retain ownership of virtually collocated equipment and permitting CLEC employees or CLEC-designated contractors to install, maintain and repair equipment collocated on a virtual basis would this type of arrangement become somewhat more palatable to CLECs.

e. Effects of Additional Collocation Requirements (¶ 150)

In ¶ 150, the Commission asked parties to comment on how adopting new collocation requirements might impact existing interconnection arrangements, existing state requirements, or existing state proceedings.

With regard to existing interconnection agreements, most agreements that Covad is familiar with state that the ILEC will provide "physical collocation as required by Section 251(c)(6)" or similar language that would automatically incorporate any change in applicable law or regulations. In addition, many agreements have specific "Change in Law" clauses that may provide a means of addressing changes in FCC or state rules or regulations.[47] That said, Covad is concerned that if the Commission implements new or modified collocation rules, ILECs will still seek to delay the availability of these new options, especially cageless physical collocation. Indeed, Covad anticipates that ILECs

[47] However, many such provisions require that the regulation be "final" or "nonappealable". This raises the possibility that implementation of rule changes could be delayed during the pendancy of any appeal.

would simply tell CLECs to await an eventual "cageless collocation" tariff that would be filed at some unspecified date in the future, while those ILECs simultaneously file appeals of the Order in this proceeding.

Therefore, the Commission should, if and when it issues modified collocation rules in this proceeding, order all ILECs to come into full compliance on the effective date of those rules. The Commission should specifically state that ILECs may not delay the offering of any alternative collocation arrangements required by the Order while the ILEC prepares a generic "tariff" for that service. The Commission should make it clear that CLECs may, upon the effective date of the rules, be able to apply for and obtain all forms of physical collocation (including cageless physical collocation) if their interconnection agreeements permit them to do so, such as agreements that contain clauses that require the ILEC to provide collocation in any form as required by applicable law. The Commission should make the same decision regarding similar clauses that may deal with restrictions on collocation equipment. In addition, the Commission should also order ILECs to immediately, upon release of the Order and at the request of a CLEC, renegotiate those agreements to incorporate any and all changes in applicable law that result from that Order. The Commission should also clearly state that the failure of an ILEC to agree to amend those existing agreements to incorporate the changes resulting from the Order within thirty days shall be deemed *prima facie* evidence of bad faith negotiation practices by the ILEC and a violation of a Commission order.

With regard to impact upon state proceedings or tariffs, since the Commission has proposed to establish national minimum standards, presumably state standards or decisions regarding collocation methods or equipment pursuant to Section 251(c)(6) that

are inconsistent with or that do not meet these minimum standards would be immediately preempted pursuant to the Supremacy Clause and Section 251(d)(3). The Commission, however, should be mindful that inconsistent state collocation tariffs would remain in place for purely intrastate purposes to the extent that those tariffs do not substantially prevent implementation of the requirements of Section 251 and the purposes of the 1996 Act.[48]

B. National Minimum Standards for Local Loop UNEs

If the FCC is truly serious about encouraging the deployment of advanced services to all Americans, then CLECs should be afforded the opportunity to use local loops so as to get that job done. It is not enough for CLECs to be grudgingly granted simple parity in the use of loops with ILECs. Such an implementing philosophy would restrict service to areas and at levels the ILECs were willing to provide. As a result, innovation and competition would be stillborn.

One example should suffice. The federal ADSL tariffs recently filed by a number of ILECs commit them only to provide DSL services where it is easy to do so, over loops in which it is easy to provide these services, and in a manner that will not threaten to cannibalize current T1 and ISDN services. There is no commitment by these ILECs to provide DSL to customers served by Digital Loop Carrier ("DLC") systems. Indeed, Covad was amused to learn that Pacific Bell is proposing to charge customers $900 to condition a line for ADSL service.[49] It is clear that these ILECs are not serious about

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[48] 47 U.S.C. §§ 251(d)(3), 252(e)(3), 261(b), 261(c).

[49] Pacific Bell Telephone Company, Tariff FCC No. 128, Transmittal No. 1986 (June 15, 1998) at Section 17.7.4(B).

deployment to all Americans, and there appears to be little ILEC interest in pushing the technological envelope to drive service out, bandwidth up, and costs down.

Simple parity in the use of loops is not enough to achieve the goal of Section 706. Covad must be afforded *parity of opportunity* in the use of existing and future loop infrastructure to make a difference. The simple fact that a Bellhead mentality prevents ILECs from capitalizing upon the opportunities that the embedded local plant posses should not similarly constrain companies like Covad from taking advantage of those opportunities. The detailed rules proposed in Attachment 4 of these Comments would provide this parity of opportunity.

1. Proposed Modifications to Loop Unbundling Rules

Attachment 4 contains Covad's proposals to revise the Commission's existing unbundling rules in a manner that would, in Covad's opinion, allow start-up competitors to deploy advanced telecommunications services rapidly. Covad is sure that other commenters are likely to have other suggestion for rule changes, and Covad certainly does not believe that Attachment 4 incorporates all possible solutions. The rules in Attachment 4 hopefully will focus debate in this docket upon the *actual rules* and not vague generalities—because experience has shown that ILECs will take advantage of any potential legal ambiguity or opportunity.

Covad's proposed rules would alter the Commission's existing rules in the following manner—

Provisioning of DSL Capable Loops

- Define the local loop network element as the provision by an incumbent LEC of the total features, functions and capabilities of the transmission facility

between a distribution frame in an incumbent LEC central office and an end user customer premises; establish that provision of that element may involve conditioning that facility to support either analog, ISDN, or xDSL services. Attachment 4, Section 51.319(a).

- Establish provisioning requirements based on the type of facilities involved, distinguishing between the currently more common all-copper facility and the increasingly deployed mixed copper-fiber facility incorporating a digital loop carrier facility. Attachment 4, Section 51.319(a)(1)-(2).
- Create a reporting requirement that would allow the Chief of the Common Carrier Bureau to determine the availability and functionality of DSLAMs capable of being located in remote terminals and of supporting multiple technical implementations of DSL services. Attachment 4, Section 51.319(a)(3).
- Require ILECs to submit plans detailing how they will deploy DSLAMs capable of being located in remote terminals and of supporting multiple technical implementations of DSL services upon the determination of the Chief of the Common Carrier Bureau that such equipment is reasonably available for deployment. Attachment 4, Section 51.319(a)(3).

Spectrum Management

- Establish "Harmful Interference", to be determined by the industry under the auspices of the Chief of the Common Carrier Bureau, as the applicable standard for DSL services.

- Explicitly state that spectral interference cannot be used by an incumbent LEC as a reason for refusing to provide, or to cease the provision of, any local loop network element. Attachment 4, 51.319(a)(4).

Subloop Unbundling

- Require subloop unbundling to provide interconnection and collocation at remote terminals. Attachment 4, 51.319(a)(5).
- Require ILECs to make space available within its remote terminals on a first-come, first-served basis until space is exhausted, whereupon an ILEC is required to construct, upon request and on a reimbursable basis, facilities within its rights of way to effectuate subloop interconnection and collocation. Attachment 4, Section 51.319(a)(5).

2. Comments on Commission's Loop Proposals

a. Adoption of National Standards (¶¶ 154-56)

Covad strongly believes that the Commission should establish national minimum standards for DSL-capable loops. Courts have recognized that the Commission has the power to define unbundled network elements pursuant to Section 251. Covad's experience is demonstrable evidence that national standards for DSL-capable loops are needed in order to foster the rapid development of competition and deployment of advanced services throughout the country.

Covad is concerned that incumbent LECs will utilize state processes with regard to DSL-loop unbundling to continue to game the system. As described above and in Covad's comments in the *706 Petitions* docket, the ILEC record with regard to making these loops generally available is deplorable. In many instances, pricing of "DSL" or

"Digital" loops has been delayed by state commissions well beyond the nine-month arbitration deadline imposed by Section 252. Pricing and availability of digital-ready loops seems to have been routinely "put off" by ILECs and state commissions.

That said, Covad agrees with the Commission's suggestion in ¶ 155 that it should consider *best practices* among states in determining the extent to which those practices can be adopted nationally. In this regard, Covad applauds those states, such as Georgia, Florida, Illinois and Michigan, that clearly require ILECs to provide ADSL, HDSL and other xDSL conditioned loops and have priced those elements in a generally appropriate manner.

In establishing national rules, the Commission should be mindful that it define the local loop element in order to provide CLECs with sufficient flexibility to provide xDSL services to as many American consumers as possible. Section 3(29) of the Act explicitly states that a "network element" not only need encompass a specific facility but "also includes *features, functions, and capabilities*" of that facility. 47 U.S.C. § 153(29). The Eighth Circuit has twice recognized that this language means that network elements are not simply "physical components" of the ILEC network but also includes the operations of the local network, including OSS, shared transport, operator services, directory assistance, etc.[50] In defining an element, the Commission is required to consider whether "the failure to provide such network element[] would impair the ability of the telecommunications carrier seeking access to provide the services that it seeks to offer." 47 U.S.C. § 251(d)(2). It is important to point out that Section 251(d)(2) talks strictly

[50] *Iowa Utils. Bd. v. FCC*, 120 F.3d 753 (8th Cir. 1997), *cert. granted*, 66 U.S.L.W. 3484 (U.S. Jan. 26, 1998); *Southwestern Bell Tel. Co. v. FCC*, No. 97-3389 (8th Cir. Aug. 10, 1998).

about services that a CLEC "seeks to offer" and does *not* speak in terms of element capabilities that the ILEC "chooses to offer".

Therefore, if existing outside copper loop plant has the "capability" of supporting a high-bandwidth digital service that a CLEC wishes to provide—even if the incumbent LEC has for some reason chosen not to take full advantage of that capability—it is fully appropriate and even necessary for the Commission to establish national rules defining the ILEC's unbundling obligation in a manner that would unleash the full capabilities of those loops. Only then will CLECs have true parity of opportunity in providing advanced telecommunications services.

b. Loops and Operations Support Systems (¶¶ 157-58)

Covad's experience confirms that competitive service introduction would be advanced if ILECs would provide CLECs with detailed loop information sufficient to make its own determination of what xDSL equipment and service a loop is capable of supporting. Covad presently uses several DSL technologies to provide the customer with optimal speed and price arrangements based on the capabilities of the underlying facility. It is essential, therefore, that Covad have efficient access to accurate electronic information about relevant operational parameters regarding ILEC constructed and maintained loop facilities.

Covad cannot represent that it has true parity of opportunity in this area today. Incumbent LECs should be required to perform loop maintenance and provisioning tasks in a manner consistent with Section 706. Information relating to loop length, the presence of analog load coils, presence and number of bridge taps, and the presence of a DLC (and the type of DLC) should be catalogued, inventoried, and made available

directly to CLECs through automated OSS. In the event that the ILEC already has automated access to this information, the discrimination issue is already clear-cut, and Covad urges the Commission to investigate (pursuant to its enforcement procedures) instances in which similar access is not granted to CLECs. In cases where automated access to this information is not in place, Covad believes that automated access to this information is part-and-parcel to obtaining access to the full "features, functions and capabilities"[51] of xDSL-capable unbundled loops and must be undertaken by ILECs. "Parity with the ILEC" is not the same as "parity of opportunity". Simply because the ILEC has chosen to support its own digital services with retrograde, manual tasks does not mean that CLECs seeking to provide these same digital services should endure those same laborious processes and manual errors.

c. Loop Spectrum Management (¶¶ 159-62)

Covad applauds the Commission's attention to loop spectrum management issues, because in the past few months, SBC has spearheaded the potential for interference as a means of restricting CLECs' ability to provide innovative services. Incumbent LECs cannot be permitted to install themselves as "Spectrum Czars" to issue bureaucratic ukases that define "permitted uses" and wield effective veto power over CLEC DSL services.

What is missing from the debate on this topic is an acknowledgement that the communications community and the Commission deal with issues of spectrum management and spectral interference every day. Indeed, one of the reasons for creating the FCC was to manage spectral interference disputes between radio broadcasters. As the

[51] 47 U.S.C. § 153(29).

Commission has long been aware in its Title III regulation of radio services, not all interference is harmful interference. If "creation of interference" had been the standard applied to wireline service introduction, there would be far fewer T-1 carriers in existence than there are today, since T-1s using the older AMI protocol are quite spectrally dirty.[52]

Indeed, the Commission has been dealing with interference issues for wireline carriers for over twenty years, under the Commission's Part 68 rules for customer premises equipment. One of the key purposes of the Part 68 rules is to set technical parameters for signals generated by terminal equipment to ensure that those signals do not cause interference, physically damage or impair the operation of the network. Interference and "cross-talk" between lines in adjacent binder groups—the *precise* spectral interference issue presented by some DSL technologies!—are key justifications for Part 68 rules.[53]

Rationales used by ILECs today regarding DSL equipment are reminiscent of pre-divestiture arguments made by AT&T with regard to connection of non-Bell-aproved equipment from 1968 to 1977. Thirty years ago, AT&T—in the wake of FCC investigations into the lawfulness of AT&T tariffs that explicitly tied the sale of telecommunications services to Bell CPE—announced that it would permit non-Bell System CPE to be connected to the network through a Western Electric "protective

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[52] ADSL Forum, *General Introduction to Copper Access Technologies*, http://adsl.com/today_index.html.

[53] Indeed, just last week, the Commission released a Notice of Proposed Rulemaking regarding these very Part 68 rules, recognizing that signal power strength on standard, analog telephone lines can cause service can cause "interference among analog carriers in adjacent binder groups, and unacceptable noise and interference cause by the introduction of excessive voltage into the network, and, contingent upon the specific service involved, pulse amplitudes." *1998 Biennial Regulatory Review—Modifications to Signal Power Limitations Contained in Part 68 of the Commission's Rules*, CC Docket No. 98-163, Notice of Proposed Rulemaking, FCC 98-221 at n.11 (rel. Sept. 16, 1998).

coupling arrangement," or PCA. After consumer complaints that these PCAs were expensive and often unavailable, the Commission began nearly a decade of extensive study, and the Bell System fought every step.[54] In 1972, John D. deButts, chairman and CEO of AT&T, said in a speech that "we cannot live with the deterioration of network performance that would be the inevitable consequence of 'certification' [of non-Bell CPE] and the proliferation of customer-provided terminals that would ensue from it."[55] When the Commission implemented the Part 68 rules in 1977, the Commission emphatically recognized that the *competitive* provision of CPE must not be sacrificed simply because some forms of CPE might theoretically cause interference or impairment to other network users. Rather than let interference and "harm to the network" become a bogeyman that would thwart competition, the Commission created a uniform telephone equipment registration system—which required Western Electric equipment to go through the same registration system that competing CPE manufacturers had to use. Then, as now, the Commission recognized the anti-competitive potential that can result when a monopoly provider unilaterally tries to become the "interference police" on the network.

While technology has certainly changed since 1977, the motives of incumbent carriers have not. Covad has observed first hand SBC's attempts to cloak anti-competitive conduct with spectrum management rhetoric. Not surprisingly, SBC seems to have discovered the issue contemporaneously with its own announced entry into DSL service provision. Several months ago, SBC pronounced through an unceremonious

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54 Peter Temin, *The Fall of the Bell System* 63-65 (1987).

55 *Quoted in* Temin at 98.